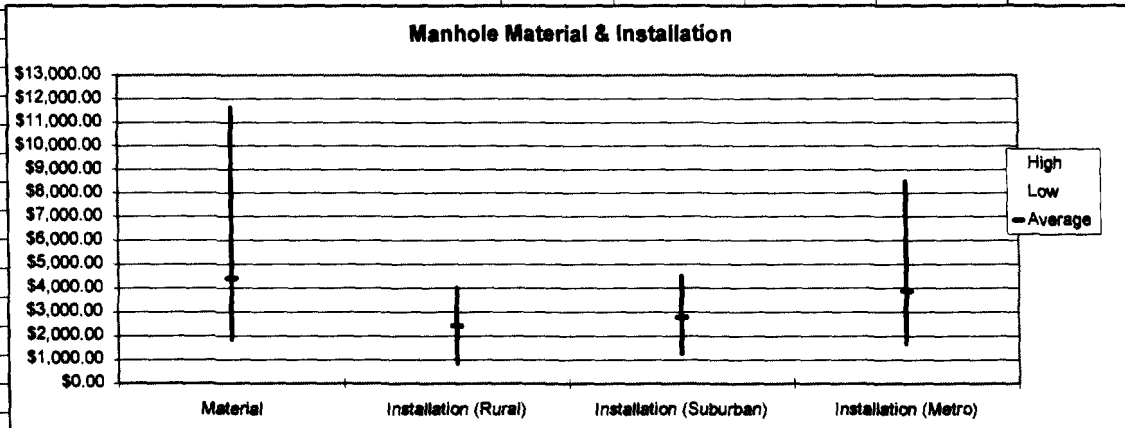


GTE Calculated Manhole Investment

Manhole 12' X 6' X 7'	Material	Excavation & Backfill (Rural)	Excavation & Backfill (Suburban)	Excavation & Backfill (Metro)
Contractor T	\$2,340			
Contractor U	\$3,389			
Contractor V	\$3,625			
Contractor W	\$3,625			
Contractor A		\$3,500	\$4,200	\$8,500
Contractor B		\$4,000	\$4,500	\$5,000
Contractor D		\$2,800	\$2,800	\$3,200
Contractor I	\$11,642	\$1,767	\$2,067	\$2,667
Contractor C		\$1,614	\$1,830	\$2,140
Contractor J	\$1,825	\$850	\$1,250	\$1,700
	Material	Installation (Rural)	Installation (Suburban)	Installation (Metro)
High	\$11,642.00	\$4,000.00	\$4,500.00	\$8,500.00
Low	\$1,825.00	\$850.00	\$1,250.00	\$1,700.00
Average	\$4,407.67	\$2,421.83	\$2,774.50	\$3,867.83
Total Installed Average		\$6,829.50	\$7,182.17	\$8,275.50



The total material cost for the Contractor T value includes the cost of frame and cover based on the values in the Inputs Portfolio.

The Contractor U value includes material plus installation as quoted in the source document.

The Contractor V and Contractor W values include the cost of delivery based on the Inputs Portfolio values.

The Contractor I value reflects an average of the price quotes provided in the referenced document.

The Contractor J values include the cost of delivery from the Inputs Portfolio.

Index
Attachment to FCC Comments
Footnote Citations

Page	Footnote	Cite
2	1	Deposition of Dean Fassett, March 19,1997
3	2	Fassett Material Document #188
3	3	Docket Nos. UT-96070 & 960371, 4/16/98 @96
4	4	Fassett Worksheet #7
13	6	Deposition of D. Fassett 6/12/97
13	7	Supplemental Testimony D. Fassett 6/20/97
21	8	Fassett Worksheet #2
26	9	Fassett Worksheet #46
26	10	Drip Loop DF – 5 - 002654
28	11	Fassett Worksheet #8

Deposition of Dean Fassett, March 19, 1997

FOR LOCATION THEREOF

1

1 BEFORE THE WASHINGTON UTILITIES AND
2 TRANSPORTATION COMMISSION

3
4 DEPOSITION OF DEAN R. CASSETT
5 March 19, 1997

COPY

6 IN THE MATTER OF THE PRICING) DOCKET NO. UT-960359
7 PROCEEDING FOR INTERCONNECTION)
8 UNBUNDLED ELEMENTS TRANSPORT)
9 AND TERMINATION, AND RESALE)

10 IN THE MATTER OF THE PRICING) DOCKET NO. UT-960370
11 PROCEEDING FOR INTERCONNECTION)
12 UNBUNDLED ELEMENTS TRANSPORT)
13 AND TERMINATION, AND RESALE)
14 FOR U S WEST COMMUNICATIONS,)
15 INC.)

16 IN THE MATTER OF THE PRICING) DOCKET NO. UT-960371
17 PROCEEDING FOR INTERCONNECTION)
18 UNBUNDLED ELEMENTS TRANSPORT)
19 AND TERMINATION, AND RESALE)
20 FOR GTE NORTHWEST INCORPORATED)

Deposition location:
555-17th Street, Suite 3200
Denver, Colorado

APPEARANCES:

JOHN B. WILLIAMS, ESQ.
COLLIER, SHANNON, RILL & SCOTT, PLLC
3050 K Street, N.W.
Washington, D.C. 20007

For GTE.

RAY V. HARTWELL, III, ESQ.
HUNTON & WILLIAMS
1900 K Street, N.W.
Washington, D.C. 20006-1109

For GTE.



AVERY WOODS REPORTING

1000 Speer Boulevard • Denver, Colorado 80204
303-825-6119 • 1-800-952-3345 • FAX 303-893-8305

1 A. Those that are meaningful at the time I
2 try to. Of course when it fills up I have to clean
3 it out because some of them are duplication and stuff
4 like that, but I keep -- try to keep what I can.

5 Q. Now, you indicated that you were
6 constantly trying to expand or upgrade your database?

7 A. Correct.

8 Q. Do you actually have a separate
9 database?

10 A. For different -- different pieces of
11 it, yes.

12 Q. Okay. What sort of database do you
13 maintain?

14 A. Well, for the things that -- again
15 as -- these are things that I personally have been
16 involved with. I just maintain a spreadsheet with --
17 well, example being the contractor prices.

18 Q. For what types of things?

19 A. Cable plowing, trenching, drop
20 placement, outside plant construction type work.

21 Q. And that's all maintained on a computer
22 database?

23 A. Yeah, I have a spreadsheet I use.

24 Q. Do you have a hard copy of it as well?

25 A. With me you mean?

1 not really readily available in a lot of places.

2 Q. All right.

3 A. Or it's proprietary.

4 Q. Do you keep databases for
5 underground fractions, buried fractions, aerial
6 fractions?

7 A. No. Other than just the notes where
8 somebody may have indicated what they felt it was in
9 their area or what I may have observed in some
10 areas. I've tried to visit the states a little bit
11 ahead of time if at all possible to personally
12 observe what's -- what's there.

13 Q. Do you keep, for example, information
14 on your database with respect to MID costs?

15 A. Yes.

16 Q. And would the database, for example,
17 have all of the quotes that you received, for example
18 for the price of a MID?

19 A. Yes.

20 Q. And so the database that you maintain
21 would be the most complete documentation of all the
22 different pieces of information that you've
23 received.

24 A. That I've personally, okay. Now,
25 Mr. Donovan or somebody else may have gotten some

1 Q. Yes.

2 A. No, I don't have one with me.

3 Q. Well, do you have one at home?

4 A. Yeah, I -- well, I mean, I can print
5 one out.

6 Q. What other information is contained on
7 your databases?

8 A. Well, I've just kept the notes that
9 I've -- from various states.

10 Q. No, I meant with respect to what
11 types -- what other types of --

12 A. Oh, material costs. By taking each --
13 each item and putting the prices that -- in there so
14 that we can come up with a reasonable or an average
15 price if possible.

16 Q. Anything else? Labor costs?

17 A. No, the labor, I don't get involved in
18 the labor -- well, contract price is -- includes that
19 labor is there, but I don't maintain the individual
20 states' labor rate. That's not -- not a function
21 that I've taken on.

22 Q. Who's taken on that function?

23 A. To the extent possible, I believe
24 that's probably maybe the Matfield people or somebody
25 has -- you know, it's -- that's information that's

1 other prices, but these are ones that I've personally
2 been involved in.

3 Q. Now, have you shared the spreadsheet
4 with other people on the engineering team?

5 A. Yes, I have.

6 Q. In electronic or documentary form?

7 A. Electronic.

8 Q. Do you know if they keep -- if the
9 other people on the engineering team keep their own
10 spreadsheets?

11 A. I -- I don't know what they -- know
12 whether they do or they don't.

13 Q. Have they ever shared any of that --
14 any --

15 A. I've gotten information on -- that they
16 had on particular items that I may have needed or
17 wasn't able to or hadn't taken -- had the time to get
18 a price on.

19 Q. On the engineering team, are you the
20 one responsible for keeping the spreadsheet?

21 A. No. That's something that I've done as
22 an individual to keep my sanity.

23 Q. Do you know if other people have kept a
24 database?

25 A. I don't know. I assume some people

Fassett Material Document #188

22

Date: Sun Jan 19, 1997 01:05 pm EST
From: John C. Donovan / MCI ID: 215-2655

TO: * Dear Fasset / MCI ID: 215-5464
CC: [REDACTED]
CC: [REDACTED]
CC: [REDACTED]
CC: Dick Chandler / MCI ID: 439-0695
CC: [REDACTED]
CC: [REDACTED]
CC: Robert Mercer / MCI ID: 437-8763
CC: [REDACTED]

Subject: Surface Texture Conditions
Message-Id: 31970119180513/0002152655PK5EM

Dear,

At the FCC Joint Board hearings, it became obvious that even though surface texture and slope are unimportant factors compared to competitive bidding, ignoring such indicators doesn't sell well to the uninformed.

Therefore, we are planning to incorporate this items in the Hatfield Model version 3.

Attached is an excerpt from BCM2 on surface texture indicators.

'0' means that BCM ignores them as far as having any effect on trenching and plowing. '1' means that BCM applies a multiplier. I would propose continuing with the same 0 and 1 indications, unless you or a contact you make think otherwise. I have added 2 columns to the spreadsheet.

One to indicate whether we believe the USGS indicator applies throughout the entire CBG, or whether only a portion of the CBG is likely to be effected. The other column is for an expert opinion as to the effect of the soil condition on the cost.

We need to lock this down ASAP. If you could (make up some default numbers) today, we could always change them before publishing the model.

John Donovan

Enclosures:

BINARY:SURFTEX.XLS saved in C:\MAILROOM\ENCLOSE\SURFTEX.XLS

FASSET 188

HIGHLY CONFIDENTIAL
SUBJECT TO PROTECTIVE
ORDERS AND PARTY
CONFIDENTIAL AGREEMENTS

909-ATT-00387

Docket Nos. UT-96070 & 960371, 4/16/98 @96

the high prices reflected the contractor's perception of installation conditions which differed from the views of other contractors.

95. Even if the terms had been defined in the questionnaire, the collection of data should have been done in a manner consistent with the way in which the information was to be used in the Hatfield Model. That is, the definition of rocky soil provided to the contractors should have been consistent with the way in which the term is used in the Hatfield Model. We note that while the Hatfield Input Portfolio discusses the modeling of soft and hard rock, these terms do not appear in the questionnaire sent to some of the contractors. Exh. CC-54, Attachment A, Bates GHATF000262- GHATF00265; Exh. 40, Hatfield Model Release 3.1 Inputs Portfolio, Section 2.7, and Hatfield Model.

96. We find that the outside plant data collected from the vendors by the Hatfield engineering team do not provide sufficient validation for the opinion of these experts.

97. It is unfortunate that GTE did not propose alternative input values for the Hatfield Model. The FCC has stated that an incumbent local exchange carrier, such as GTE, is obligated to prove the nature and magnitude of the costs it seeks to recover.

We note that incumbent LECs have greater access to the cost information necessary to calculate the incremental cost of the unbundled elements of the network. Given this asymmetric access to cost data, we find that incumbent LECs must prove to the state commission the nature and magnitude of any forward-looking cost that it seeks to recover in the prices of interconnection and unbundled network elements.

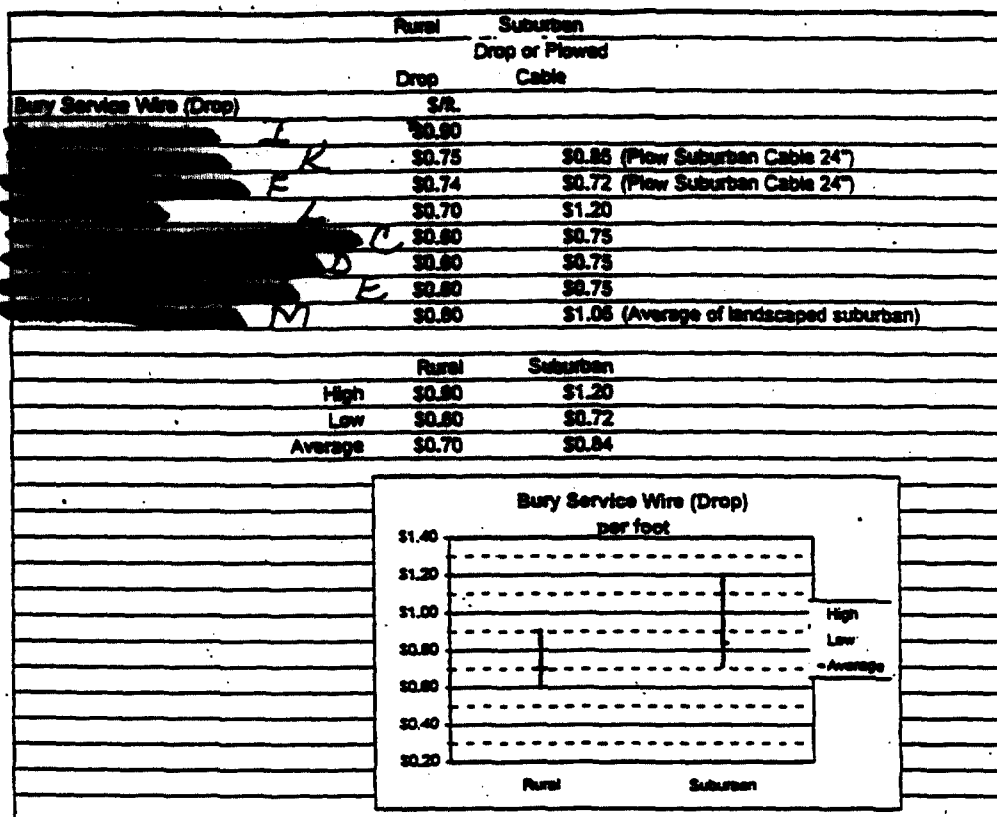
FCC Interconnection Order at ¶680.

98. In summary, the Commission disagrees with the method used by the Hatfield team to collect data from outside plant contractors. However, no reasonable alternative Hatfield Model input values were provided. Consequently, lacking an alternative, the Commission will utilize the model's default values. Our determination of the loop cost has taken into account the likelihood that the Hatfield Model understates cable placement costs.

B. Pole Costs

99. The Hatfield Model assumes that a 40 foot, class 4, pole can be installed for \$417.00. This value reflects the material and labor costs, as well as periodic down-guys and anchors. Exh. 40, RAM-3, at 16.

Fassett Worksheet #7



FASSET 7

HIGHLY CONFIDENTIAL
 SUBJECT TO PROTECTIVE
 ORDERS AND PARTY
 CONFIDENTIAL 909-ATT-0017

Deposition of D. Fassett 6/12/97

Page 121

Page 123

1 would run a business on averages, you would run a
2 business from what would be reasonable, lowest bids,
3 knowing that you were going to get a quality — the
4 same product or the same service delivered to you and
5 I've asked that if they publish this again, that they
6 remove averages because it just clouds the whole
7 issue and it's not the way you would properly run a
8 business, especially if you're building a telephone
9 network in a TELRIC environment.

10 Q. Who did you ask that question to?

11 A. I stated that I believe to Mr. Donovan and
12 I've stated that to one fellow at Hatfield I believe
13 that was —

14 Q. Do you know who?

15 A. Dave Nugent.

16 Q. What were their responses?

17 A. That they agreed with me, that that's not how
18 you would — how you would award bids is on average.

19 Q. Would you take the lowest?

20 A. I would take the lowest qualified bidder

21 that's going to give me the quality product, and if I
22 know those bidders and they're going to give me the

1 the labor rate and that's how it arrives at that.

2 Q. Okay. If we take 150 minutes, that's 2.5
3 hours.

4 A. Right. Which is excessive in my opinion.

5 Q. But if we multiply that times —

6 A. If a technician can't place a drop in an
7 hour, there's something wrong. I have an issue
8 personally with that number.

9 Q. All right. If we take 2.5 hours times the
10 direct loaded labor rate \$35 —

11 A. Correct.

12 Q. — doesn't that total around \$83?

13 A. But I think the model does — I'm not certain
14 how the model handles drop because I think you're
15 talking two pair, you have two lines in there, I'm
16 not a hundred percent certain on how the model does
17 that.

18 Q. Okay. So you don't know how that number
19 is —

20 A. I don't know.

21 Q. The aerial total number is not something that
22 you've done —

Page 122

Page 124

1 quality product, then I'm going to award the bid to
2 them. That's the way you would, especially in an
3 environment that we're building this hypothetical
4 network.

5 Q. Okay. All right. Why don't we move on to
6 first of all the placement of aerial drops. That I
7 believe is on 2.2.2 still of HIPS on page 9.

8 A. Correct.

9 Q. That has your aerial total.

10 A. Correct.

11 Q. It also carries over to page 10, you have a
12 page 10 that has aerial drop placement which is
13 more — a more extensive chart.

14 A. Correct.

15 Q. Okay. I just have one quick overview
16 question. The aerial total number for the two lowest
17 density areas, zero to five and five to 100 —

18 A. Yes, I see that.

19 Q. — states 5833 — \$58.33.

20 A. Correct.

21 Q. How is that number arrived at?

22 A. I believe it takes the installation time and

1 A. No.

2 Q. — to support —

3 A. I've provided cost per foot, cost per hour if
4 you will, which is in there, that's a figure that we
5 know basically from what loaded rates are. And the
6 time or the distance, I had input into the distance
7 on those.

8 Q. Okay. If we break out that aerial total
9 number 58.33, not just for that but for the entire
10 column there, aerial total —

11 A. Correct.

12 Q. — we can — if we divide that by the length
13 of the drop we get a price per foot, correct?

14 A. Yes.

15 Q. Okay. And so —

16 A. Installed price that would be.

17 Q. Okay. Which is the same thing as our
18 installed drop placement wire, what we were just
19 talking about.

20 A. (Nodding head.)

21 Q. And if we do that using the 58.33 and 150
22 feet we get a — you can check my math — 39 cents

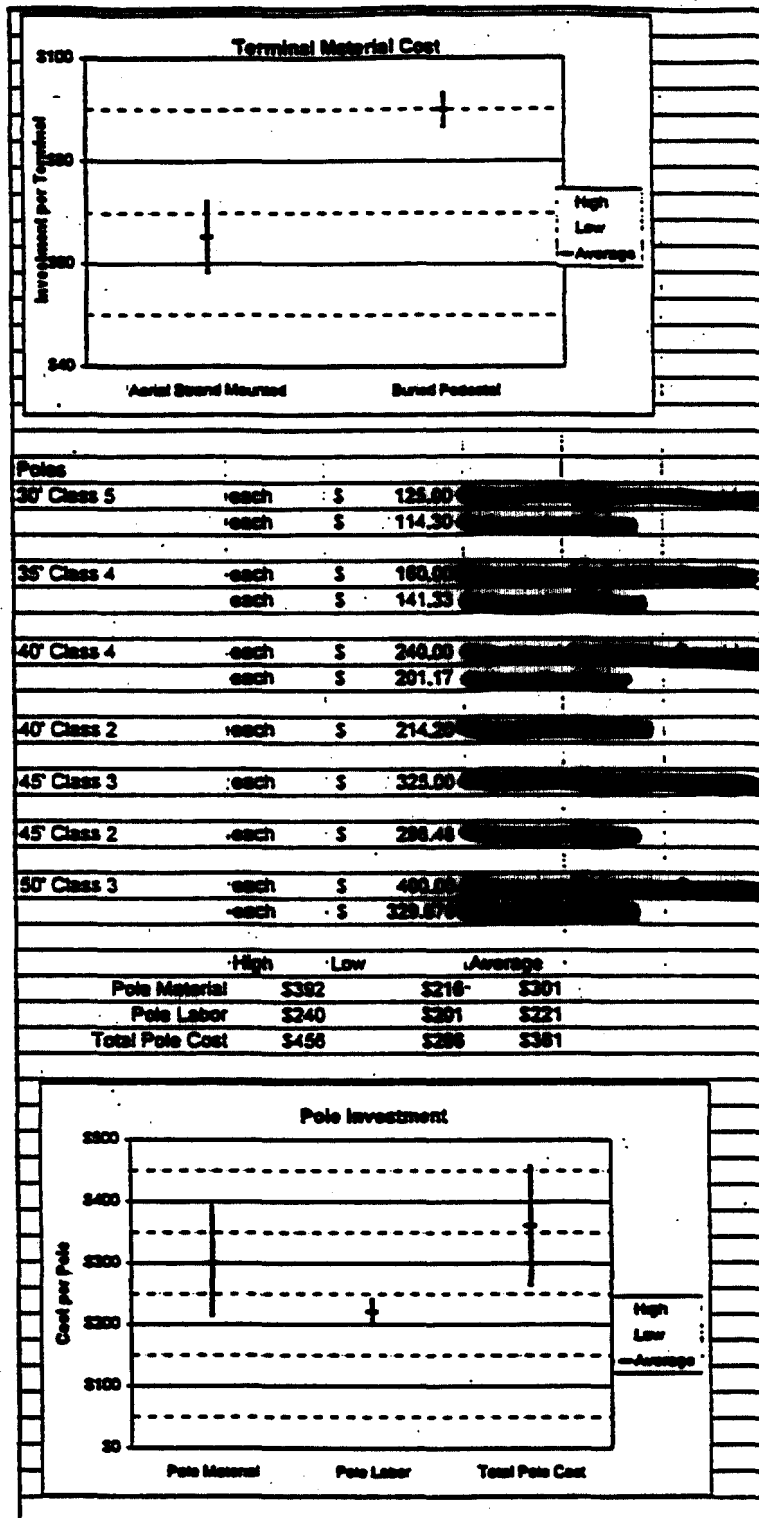
Supplemental Testimony D. Fassett 6/20/97

**WHY THE DEFAULT INPUT FOR AERIAL DROP PLACEMENT COST
DIFFERS FROM MR. MURPHY'S CALCULATIONS?**

A. The aerial drop parameter referred to by Mr. Murphy is actually a typographic error in a DRAFT copy of documentation known as the Hatfield Input Portfolio binder. The installation time for placement of an aerial drop in the two lowest density zones was supposed to have been 100 minutes, not 150 minutes. Hence, the per minute cost of \$.5833 times 100 minutes equals \$ 58.33 per drop. In my opinion, the 100 minute (1 hour and 40 minute) installation time is very conservative, and is significantly longer than the time required in actual practice. This work operation, on average, should take no longer than 30 minutes by a skilled craftsperson, especially in a TELRIC environment where several drops would be placed at the same time.

I am sure Mr. Murphy would agree that when he was a installation manager at NYNEX, it would have been unacceptable for a technician to have averaged 100 minutes for the placement of aerial drop wire. In fact, the ECRIS program, (Engineering Construction Records Inventory System) developed and used by NYNEX, Mr. Murphy's previous employer, allows a technician approximately 30 minutes per drop when placing multiple drops. This includes any travel and set up time as well. Mr. Murphy criticizes the aerial drop placing cost as being understated in the Hatfield Model; yet installers working for ILECs are not

Fassett Worksheet #2



FASSET 2

HIGHLY CONFIDENTIAL
 SUBJECT TO PROTECTIVE
 ORDERS AND 909-ATT-00176
 CONFIDENTIAL

Fassett Worksheet #46

I. INTEREST RATE

Eighteen (18) percent per annum compounded daily
(Reference Article V, Paragraph 5.2 & Article VIII, Paragraph 8.1).

II. UNAUTHORIZED ATTACHMENT CHARGE

\$60.00 per pole
(Reference Article V, Paragraph 5.4).

III. BASIC POLE HEIGHT

Forty five (45) ft. Class 4, FIR or Equivalent
(Reference Article IX, Paragraph 9.1.a).

IV. INSPECTION AND TREATMENT FEE

\$40.00 per pole
(Reference Article X, Paragraph 10.5).

FASSET 46

~~HIGHLY CONFIDENTIAL
SUBJECT TO PROTECTIVE
ORDERS AND 3RD PARTY
CONFIDENTIAL AGREEMENTS~~

909-ATT-00016

Agreement Covering
Joint Use of Poles
Between

Central Hudson
Gas and Light

New York Telephone

Central Hudson



New York Telephone

ADMINISTRATIVE AND OPERATING PRACTICES

CHGE - NYTCO

SECTION 9

PAGE 7 OF 8

ISSUE 1

2. Where street lights or private area lights are fed by means of a drip loop entering the bracket from the surface of the pole, NYTCO's messenger will be at least twelve (12) inches below the lowest part of the loop, unless the drip loop is enclosed in an approved insulating conduit.

3. Due care should be exercised in opening connections between the grounded systems. When a NYTCO messenger is removed, NYTCO shall disconnect the bonding conductor, remove as much of it as practical and securely fasten the remaining wire out of the way.

9.10 Riser Pipe Attachments

Each Party will generally be allowed no more than two (2) risers per pole without consent of the other Party.

Risers should be located on the pole in the safest available position with respect to climbing space and possible exposure to traffic damage.

CHGE will normally place its risers on the field quarter away from traffic.

NYTCO will normally place its risers on the road quarter away from traffic or the field quarter toward traffic.

Fassett Worksheet #8

RECEIVED
SUBJECT: PROTECTIVE
ORDERS AND

Manhole			w/o del & cvr
12' X 6' X	each	1,885.00	\$125 Delivery \$1,885.00
12' X 6' X	each	3,150.00	\$239 Del \$2,800.00
12' X 6' X	each	3,500.00	\$3,150.00
10' X 6' X	each	2,500.00	1987 Natl Const. Estimator \$2,000.00
2,638.33 Average			\$2,805.00

High	Low	Avg
\$3,150	\$1,885	\$2,605

Manhole Material

12' x 6' x 7' Manhole

FASSET 8

HIGHLY CONFIDENTIAL
SUBJECT UNDER PROTECTIVE
ORDERS AND 909-ATT-00170
CONFIDENTIAL

Exhibit 4

Analysis of the HAI and BCPM Models Input Parameters and Factors For Cable Costs by Network Engineering Consulting, Inc.

There are a number of input parameters and factors that the Commission should consider for copper and fiber cable. However, a direct comparison of cable input parameters for the HAI and BCPM models is complicated by serious differences in the models' methodologies. The HAI Model's single default cable input values bundle all relevant costs (material, engineering, placing, splicing, supply, taxes, and messenger strand (which is only used in aerial environments)). By bundling these unique costs, which are supported only by expert opinion, the HAI Model hides them from examination and adjustment by the users, which makes an "apples-to-apples" comparison to actual costs incurred by the ILECs almost impossible. BCPM, in contrast, provides users with the capability to individually account for material, supply, placing, splicing and engineering costs, as well as taxes, by structure type. Messenger strand, which is used to support aerial cable and requires a separate placing operation, is also identified separately in BCPM.

The Commission should also address input parameters for the aerial, buried, and underground distribution and feeder mix. A direct comparison of aerial, buried and underground distribution plant mix from the HAI and BCPM Models is not possible since the HAI Model includes block and riser cable and the BCPM Model varies plant mix by terrain type. However, the HAI Model has included an algorithm that overrides the user's specified mix based on a life-cycle cost analysis that is performed in the model.

The support for the parameters behind the analysis is only "expert opinion." While GTE prefers the approach used by the BCPM Model compared to the HAI Model, GTE's position is that the Commission should use company-specific input values by state that are based on an examination of each company's current practices, *not* default input values based on "expert opinion."

Another cable-cost related issue is both the method and input values to determine the drop lengths, drop wire costs and terminal costs. The HAI Model 5.0a's drop costs are based upon an aerial/buried mix by density zone, a material cost per foot, a fixed length of drop by density zone, and a labor cost per placement (not by foot) for aerial drop wire in each of the density zones. The drop cost assumptions understate the length of the drop and the investment for both aerial and buried drops.

The HAI Model engineering team received five estimates concerning drop length in response to their surveys sent to various contractors.¹ For rural areas, the lengths ranged from 94 to 375 feet. For suburban areas, length ranged from 75 to 100 feet. Although the shortest drop distance estimated in the industry survey was 75 feet, the HAI Model assumes a drop distance of 50 feet in high-density zones. The HAI Inputs Portfolio, quoting from a Bellcore survey, indicates that, based on the most recent nationwide study of actual loop lengths, the average drop length is 73 feet.²

¹ See Exhibit 3 for a more detailed discussion of the support material used by the HAI Model Developers to determine the default values in the HAI Model for drop wire distances, buried drop wire placement costs and aerial drop placement costs.

² HAI Inputs Portfolio, Section 2.2.1.